

Claims

1. Glycoprotein that comprises at least one section of the amino acid primary structure of CD55 and a tumor-specific glycostructure.

2. Glycoprotein according to claim 1, characterized in that the glycostructure reacts with monoclonal antibody SC-1.

3. Glycoprotein according to claim 1 ~~or 2~~, wherein in SDS-polyacrylamide-gel electrophoresis, it exhibits an apparent molecular weight of 82 kD.

4. Process for obtaining a glycoprotein according to ^{Claim 1} ~~one of~~ claims 1 to 3, wherein membrane preparations are produced from cells of the human adenocarcinoma cell line 23132, and the glycoprotein is obtained therefrom by size-exclusion and/or anion-exchange chromatography.

5. Use of a glycoprotein according to ^{Claim 1} ~~one of~~ claims 1 to 3 in a test process in which the ability of a substance to bind to the glycoprotein is determined.

6. Use according to claim 5, wherein the ability to bind to the glycostructure is determined.

7. Use according to claim 5 ~~or 6~~, wherein the ability of the tested substance to induce apoptosis, especially in tumor cells, is determined.

8. Use according to ^{Claim 5} ~~one of claims 5 to 7~~, wherein the ability of the tested substance to induce a phosphorylation cascade that is mediated by glycoprotein CD55 is determined.

9. Use according to claims 5 to 8, wherein the glycoprotein is used in isolated form, as a cell extract, especially as a

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membrane preparation or in the form of complete cells, especially of human adenocarcinoma cell line 23132.

a 10. Use according to ^{Claim 5} ~~one of claims 5 to 9~~ for identifying substances that bind specifically to tumor cells.

11. Use according to claim 10 for identifying agents for tumor diagnosis and/or tumor therapy.

a 12. Use according to ^{Claim 5} ~~one of claims 5 to 11~~, wherein the pharmacologically compatible substances are tested.

13. Use according to claim 12, wherein the tested substances are selected from peptides, peptide mimetic agents, antibodies, antibody fragments and antibody derivatives.

14. Use of substances that bind specifically to a glycoprotein according to ^{Claim 1} ~~one of claims 1 to 3~~, with the exception of the monoclonal antibody SC-1, for the production of agents that induce apoptosis.

15. Use of substances that bind specifically to a glycoprotein according to ^{Claim 1} ~~one of claims 1 to 3~~, with the exception of monoclonal antibody SC-1, for the production of anti-tumor agents.

a 16. Use of substances that bind specifically to a glycoprotein according to ^{Claim 1} ~~one of claims 1 to 3~~, with the exception of monoclonal antibody SC-1, for the production of agents for tumor diagnosis.

a 17. Process for the preparation of the agents that induce apoptosis, wherein a potentially active substance is tested on its ability for specific binding to a glycoprotein according to ^{Claim 1} ~~one of claims 1 to 3~~ and in the case of a positive test result,

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the substance is converted into a form for dispensing that is suitable for pharmaceutical applications optionally together with commonly used adjuvants, additives and vehicles.

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18. Process for the preparation of anti-tumor agents, wherein a potentially active substance is tested on its ability for specific binding to a glycoprotein according to ~~one of claims 1 to 3~~ ^{claim 1} and in the case of a positive test result, the substance is converted into a form for dispensing that is suitable for pharmaceutical applications optionally together with commonly used adjuvants, additives and vehicles.

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19. Process for combatting tumors, wherein an anti-tumor-action quantity of a substance that can bind specifically to a glycoprotein according to ~~one of claims 1 to 3~~ ^{claim 1}, with the exception of monoclonal antibody SC-1, is administered to a patient.

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20. Process for diagnosis of tumors, wherein a sample that is to be tested or a patient who is to be tested is brought into contact with a substance that can bind specifically to a glycoprotein according to ~~one of claims 1 to 3~~ ^{claim 1}, and the presence, the localization and/or the quantity of the glycoprotein in the sample or in the patient is detected.

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21. Use of substances that specifically bind a glycoprotein according to ~~one of claims 1 to 3~~ ^{claim 1} to trigger a phosphorylation cascade in tumor cells.

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22. Use of substances that bind specifically to a glycoprotein according to ~~one of claims 1 to 3~~ ^{claim 1} for transient

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increase of the CD55/DAF presentation in membranes of tumor cells.

a 23. Use of substances that specifically bind a glycoprotein according to ^{Claim 1} ~~one of claims 1 to 3~~ for inducing apoptotic processes that do not comprise any cleavage of poly(ADP-ribose)-polymerase (PARP).

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a 24. Use of substances that specifically bind a glycoprotein according to ^{Claim 1} ~~one of claims 1 to 3~~ for inducing a cell cycle arrest in tumor cells.

a 25. Use of substances that bind specifically to a glycoprotein according to ^{Claim 1} ~~one of claims 1 to 3~~ for inducing apoptosis in dormant tumor cells.

a 26. Use according to ^{Claim 21} ~~one of claims 21 to 25~~, wherein the specifically bindable substance comprises antibody SC-1.

a 27. Use according to ^{Claim 21} ~~one of claims 21 to 26~~, wherein the substances are used in the form of conjugates with labeling or effector groups.

a 28. Use according to ^{Claim 21} ~~one of claims 21 to 27~~, wherein the substances have multiple binding sites for a glycoprotein ~~according to one of claims 1 to 3.~~

29. Use according to claim 28, wherein the specifically bindable substances are cross-linked.

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